

ABSTRACT

A rear projection screen has successively, starting from the projector and
5 moving outwards, a Fresnel lens (6), a surface diffuser (8), a thin support (10)
bonded onto a thick substrate (24) provided with an outer anti-glare (26) layer. Light
emitted by the projector (2) is collimated by the Fresnel lens (6). It passes through a
diffuser (a) having an elongated radiation diagram with a horizontal major axis. This
diffuser provides spreading of light in the horizontal plane, so as to provide a wide
10 horizontal angle of view. The light leaving the diffuser is received on a support (10)
with cylindrical focusing elements (18) substantially parallel to the major axis of the
diffuser radiation diagram and an opaque layer (20) with apertures (22) adapted to
allow light focused by the focusing elements to pass. As the focusing elements are
parallel to the major axis of the diffuser, practically all the light projected is
15 transmitted. Thanks to the presence of the focusing elements, the display screen has
an appropriate vertical angle of view. The presence of the opaque layer ensures
optimized contrast in view of the rearward position of the diffuser (8) with respect to
the support (10).

20 Figure1.